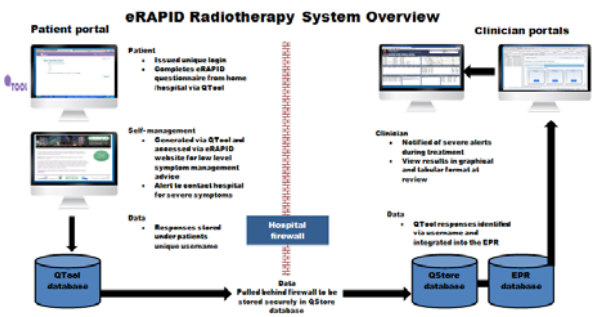
affect patients months/years post-treatment, when centralised follow up in specialised RT clinics is infrequent. A feasible cost-effective model to allow remote measurement of RT AE is required. eRAPID is a web-based electronic patient reporting system including severity linked alerts/self-management advice [1,2,3.] (an RCT assessing feasibility in systemic therapy is underway). An eRAPID system for patients undergoing radical prostate cancer therapy is being developed in St James's Institute of Oncology in Leeds and at the Christie Hospital Manchester UK.

Materials and Methods: To develop eRAPID for RT patients we will 1) identify and develop appropriate PROMs(patient-reported-outcome-measures) to facilitate remote symptom reporting, 2) develop and display self-management advice for low level problems and determine severity related algorithmic treatment responses, 3) map the process of current treatment pathways via interviews with patients, key professionals and carers, 4) successfully integrate PROM questionnaire software (QTool) into existing electronic patient records and RT delivery systems to facilitate 'real time' data flow. We will ultimately assess the feasibility of the eRAPID system in a multi-site trial with prostate and other patient groups.

Results: We have selected appropriate validated PROM AE measures from a systematic review of RCT [4]. Self-management advice has been developed for low level AE (≤CTCAE grade 2). Using expert consensus methodology we have augmented the AE PROM with additional items to provide comprehensive coverage of sexual functioning and anorectal symptoms. We have successfully mapped the patient pathways for radical prostate treatments and identified the key health professionals placed to introduce the eRAPID system in RT. A pilot of the eRAPID system developed for systemic therapy was well received by breast cancer patients (n=12) and an RCT with 500 patients in systemic therapy is ongoing.



Conclusions: We envisage eRAPID will bring benefits for patients (better self-management of mild AE, earlier detection/treatment of late AE, increased patient confidence), benefits for clinicians (improved AE documentation, patient management and audit) and benefits to the health service (reducing costs from hospital contacts/admissions). Ultimately systematic electronic collection of treatment related-AE will allow the development of predictive models of care and allow comparison and evaluation of new RT approaches.

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Acute toxicity with helical image guided IMRT for prostate cancer: hypofractionated versus conventional regimes

A.M. Bates[1], J.E. Scaife[2], M. Romanchikova[3], O. Young[1], A. Styling[4], S.G. Russell[4], N.G. Burnet[2]

[1]*Addenbrooke's Hospital Oncology Centre, Cambridge Cancer Trials Center, Cambridge, United Kingdom*

[2]*University of Cambridge Department of Oncology, Cambridge Biomedical Campus Addenbrooke's Hospital Hills Road, Cambridge, United Kingdom*

[3]*Cambridge University Hospitals NHS Foundation Trust, Medical Physics and Clinical Engineering, Cambridge, United Kingdom*

[4]*Cambridge University Hospitals NHS Foundation Trust, Department of Clinical Oncology, Cambridge, United Kingdom*

Purpose/Objective: This study determined rates of acute toxicity in participants with prostate cancer receiving helical image guided IMRT on 2 TomoTherapy units. Prescriptions of 60 Gy in 20 fractions in 4 weeks (cohort A) were compared to 74 Gy in 37 fractions in 7½ weeks (cohort B). This is a sub-study of VoxTox, a large research programme, linking daily delivered dose during radiotherapy with toxicity.

Materials and Methods: All participants received radical radiotherapy (RT) to the prostate. Of 118 participants, 47 were in cohort A and 71 in cohort B. Participants were not randomised; doses were prescribed using clinical judgement.

Participants were approached for the study at their pre-treatment appointment and consent was received prior to treatment commencing. A baseline questionnaire was completed at consent and acute toxicity questionnaires were completed during treatment at 2-week intervals, until 4 weeks after treatment.

Baseline and acute toxicity questionnaires were developed by the VoxTox research team, and designed so that results could be mapped onto validated toxicity scales. This study focussed on urinary and bowel function.

All data were collected directly into an electronic clinical report form (eCRF) by a trained healthcare professional. The eCRF system proved highly effective, as missing data became minimal.

Results: The two cohorts were balanced at baseline. Approximately half the participants experienced grade 1 urinary issues (51% vs 45%) and the majority had no bowel issues (92% vs 89%). Grade 2 or greater (2+) urinary issues were seen in 28% vs 27% and bowel issues were seen in 7% vs 3%.

During treatment, the rate of toxicity development was steeper in cohort A than cohort B, due to the dose acceleration from the higher dose per fraction. Urinary toxicity was greater at week 2 in cohort A compared with cohort B, with grade 2+ toxicity experienced by 37% compared with 30%. These rates remained stable for both cohorts during the rest of treatment. Bowel toxicity peaked towards the end of treatment in both cohorts; rates again were higher in cohort A than cohort B, at 25% vs 14%.

After RT, urological recovery in the 2 cohorts was almost identical. At 2 weeks, the rate of grade 2+ toxicity was 13% for both. This remained fairly constant: rates were 12% & 11% at week 4 after treatment. Bowel recovery however showed a difference between cohorts at 2 weeks after RT, with toxicity of 20% for cohort A vs 12% for cohort B. This difference between the groups had reduced by week 4 and rates were 7% vs 13% at this point. These data will soon be correlated with accumulated dose during the course of treatment (D_A).

Conclusions: This study indicates greater acute urinary toxicity in the hypofractionated group, but equivalent rates and degree of recovery for both cohorts. Acute bowel toxicity was also greater with hypofractionation. The degree of recovery was again similar, but took longer for the hypofractionated group. These results are comparable to those found by the CHHiP prostate RT study, validating our methodology.